THE MOUNTAINS' ROOTS. of Great Ranges.

It is well known that mountains at tract the plumb line, and thus render latitudes determined by its means or by a spirit or mercurial level insocurate in their vicinity. During the trigonometrical survey of India the amount of this error was carefully determined in several localities near mountains, but a discrepancy appeared. When the mass of the Himaayas was estimated and its attraction calculated it was found to be more than the observed attrac-tion. The same thing had occurred in the original experiment by Maskelyne at Schehallion in Scotland, and a similar deficiency in the error produced was noticed by Petit in the case of the

Many attempts were made to explain the discrepancy, but that which was advanced by the late Sir G. B. Airy seems best to account for all the phenens, and is that adopted by Mr. It is that every mountain mass on a continent has a much larger mass projecting beneath the crust into the liquid substratum, exactly as an iceberg has a larger mass under the water than above it. Sir G. B. Airy argued that whether the crust were ten miles or a hundred miles thick it could not bear the weight of such a mass as the Himalayan and Thibetan plateaus without breaking from bottom to top, and receiving support by partially sinking into the liquid mass. The best experiments show that the proportionate densities of most rocks in a solid and a liquid state are approximately as ice is to water, and thus no mountain masses can be formed, whether by lateral pressure or other agency, without a corresponding protuberance forming below to keep the crust in equilibrium. It is this displacement of the denser substratum by the less dense "roots of the mountains" that leads to the total attraction of such mountains being less than it oth-erwise would be. In our author's words, "the roots of the mountains can be felt by means of the plumb-line."—
A. R. Wallace, in Fortnightly Review. A BOHEMIAN LIGHTNING-ROD.

How the One Invented by Divis Was Con-The lightning-rod of Divis was con-

structed as follows:
A pointed, slender from bar formed the main part of the machine. Fastenad to it were two cross-bars, thus making four arms, across each of which, in turn, a shorter bar was laid. And each of the twelve extremities so effected bore a box filled with shavings of iron in which twenty-seven brass needles were stuck, making three hundred and twenty-four needles in all. The main bar was supported by a wooden column sufficiently high (fortyeight feet at first, afterward one hundred and thirty-two feeth to secure protection for the building and its immediate surroundings. Several iron chains connected the main bar with the earth. The effect of the machine was to divide the lightning into as many sparks as there were needles (three hundred and twenty-four), and thus lessen its force. It might, therefore, more properly be called a light-ning-divisor.

Scarcely had the rod been erected when a storm came rushing on from the north. Thunder-clouds hung over Prendice, and occasionally white shafts of lightning were seen darting from the clouds and flying toward the coneloud enveloped the machine and the storm soon passed away without doing any damage. For two years Divis continued experimenting with his lightning-rod; the results were published by Dr. Scrinci in the Prague News (1754). Having satisfied himself in regard to the utility of his new machine Divis offered to the emperor a plan for erecting a number of conductors in various parts of his empire. The emperor submitted the plan to Viennese mathematicians, who were unfortunately a little behind the times, and reported unfavorably upon the Bohemian's proposition. The plan was conse-quently never carried out.—J. J. Kral, in Popular Science Monthly.

Thad Stevens' Will.

Thaddens Stevens was considered one of the best lawyers to draw a will or to find ways to break one already drawn in the state of Pennsylvania, and yet twenty-five years have passed since he was gathered to his fathers, and the courts have not decided yet what disproperty, so muddled is the will which position he intended to make of his own granted to a favorite relative on a variety of original conditions. The costditions failed, and a children's home was the residuary legatee, with the additional condition that the estate should reach \$30,000. Again the condition seems to have failed, and now a relative in Indiana appears and claims the estate on the ground that the required sum which was necessary to give vitality to the children's home bequest was nade up largely by delay and accumulation of interest, and not by the proper assets of the estate. With the memory of the Tilden will and others, one can not but ask why an eminent lawyer is so prone to muddle his own legal docu-

menta?-Boston Journal. The Way to Look at It.

A Cass avenue man, who is consider able of a philosopher, has a nervous wife and henceds all the philosophy in ight. The other morning about three clock she awoke him with a shake. "Sh-sh," she whispered, as he started

to make a few emotional remarks, there's robbers down-stairs." "How do you know?" he inquired.

"I heard them as plain as could be." "Are you sure they are down-stairs?" "Of course I am; can't I hear? Go

"I guess not," he said bravely. "If they are there, I don't want to go where they are, and if they are not there, what's the use of going down at all? Let's go to sleep and wait until moring," and in two minutes he was exoring away comfortably oblivious. Detroit Free Press.

-In Sections -- Ninety-Five - "Say, Blanks, have you read 'Romeo and Juliet?" Ninety-Six-"I've read Romeo and I intend taking up Juliet soon."-

Scrimp-"I thought you said I might bring these clothes back if they didn's suit" Cohen—"Yaw; but I didn't say riding hat from the front to the middle of the back behind. It was lines all

THE NEW SPRING MODES.

With Daffodils and Croons Come Fresh Hats and Gowns.

Freeks Like the Flowers of Many Colon At a Picture Show—At the Openings —Wherever Women Gad in Gay Gatherings.

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The deffodils and parcissus in long necked Ariel vases are wonderfully pretty on the spring dinner tables, and early tulips in blue china bowls filled with moss make us really believe that by and by the dreary season of blowing and anowing will be done. At a very



andered" over the cloth at their stess' and the prettiest one:

who sat in the place of the mistress at in his hands; covered with white tape table, of a faint primrose yellow blush-ing into pink. The front of the skirt, most of them. I went to see his storage which enlarged its boundaries as the rooms as I would have gone to a mudiciates of the hour have made imperative, was of pink satin, embroidered in to think of bringing these things out great scrolls with little gold beads. At the bottom was a flounce of lace deep enough and flimsy enough to have been exchanged for a fortune, but eaught up fortable and portly, the other shabby with double bows of yellow velvet so and white haired. The man did not

Letters from Mothers

speak in warm terms of what Scott's Emulsion has done for then icate, sickly It's use has 7 brought E

thousands back to rosy health. **Scott's Emulsion**

of cod-liver oil with Hypophosphites is employed with great success in all ailments that reduce flesh and strength. Little ones take it with relish.

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sbout with buttercups and trimme with black plumes and yellow ribbon. A model bonnet was of jet and gold threads, with standing bows of blue velvet in front and an odd arrangement of lace. like a rooster's tail feathers, fapning out behind. It tied under the chin with blue velvet strings.

A brown straw was more striking than either of these. It was trimmed with two wide loops of velvet, one green, the other of the shade of the velvet, and with roses in pale shading to wivid pink tones.

There was a man who hunted New York over for hoop skirts the other day; not the new orinolines that come from France, but the old ones that used to be made here. He got the addresses dainty little feast yellow and mauve and found their buildings torn down or bowls, and ribbons of matching colors ing is a lost art, and but one man in the "meandered" over the cloth at their good pleasure. Spring toilets were out to keep in countenance the shy spring flowers, and of them all this was the latter than the samples of the make of the flowers, and of them all this was the latter when a revival of the hosters, and the prestices one. fashion was threatened in 1881. There A shot and watered silk she wore are thousands of the old skeletons still



TWO COSTUMES AT AN OFFICIAL

recklessly as to suggest that fortunes | know them. "Don't you remember were still in reserve where the first had eome from. But I am not talking of ____," said the other. "We used to this frock for its skirt bravery, but because of its quaint and stately collar, turned back cape-like behind the shoulders, lying in stiff embroidered folds over the tops of the puffed velvet sleever and parting in two revers in front to show the lace stomacher that came up between. The white throat in front was all uncovered and so were the arms below the elbows, the gloves sensibly stopping when they had progressed above the wrists but a very little way. The sleeves were of deep yellow velvet, banded just above the elbows with embroidery. The waist was gathered into an embroidered belt and one little crocus was tucked into the hair.

Various New York women artists are going to send various things to the world's fair. I don't know who they are, but they had an exhibition the other day and all the spring clothes were there. That is why I don't know more about them and their pictures.

A black satin dress was there, with three full-drawn flounces about the bottom and with a huge bonnet of black straw and white gloves, black stitched. A dress of black silk erepon was there under a short cape of black lace and jet a rose pink silk embroidered with butand under a black hat with a soft gray silk crown.

But brighter and more springlike cos- erately" stiffened with horsehair. tumes were there also. There was a A third tea gown was of pale creamy hat of black chip with a crown of amber | brown satin, with a Watteau back and silk and four black plumes. The brim a cascade of yellow lace on each side of curved about quaintly on the left side the loosely-flowing front. The sleeves over a pretty face, and which people were blue velvet in the Velois shape nowadays tend to consider of more con- and the crinoline-alas! that I say itence-over a pretty dress of petunia was quite appreciable. red silk, with a skirt some eight yards round, and accomplishing the wonderful feet of falling softly in spite of the, to unacoustomed eyes, tremendous distention. You don't like the combination? Its the red and yellow of the tween them. It had puffed sleeves of April tulips, and you can't better them

in a garden bed, you know. At a millinery opening it appeared that hats, after all, have changed comparatively little. A black chip was a good model. Its crown was an inch and a half high and curved. Its brim

work for you," said they both, "and we thought you might want to take us back, for we heard that hoop skirts are coming in."

It was a pathetic minute to live through. The man remembered them both, when he had looked at them and thought a bit, as among his "girls" when his hoop skirt factory was in full blast a generation ago.

It was the coming back of a trade from the dead, for the man, though he sens them away, told them to call

But this is not fashions. Here areto return to our muttons-some hoor skirt gowns. The first is a tea gown Think of lounging on a divan in steel springs. But that's what we're coming to. This one was of cream-colored crepe, with hanging sleeves and a big drapery sash of yellow silk. You have to adjust it carefully when you lie back in it, else it'll fly up about your heels.

The next is a Japanese lounging dress. Think of the three little maids in crinoline! The gown that's after the manner of the three little maids was of terflies in rose and blue. It had Indian gauze sleeves and, yes, it was "mod-

As good an example of the new fashion as I have seen was a pale pink brocade gown, with every seam widening below the knee and kept out by two pink flounces, with a white one bepink velvet and a pink chemisette of the same stuff coming out from the brocade front and softened with an edge of lace and passementeria

For day wear rough serges are everywhere, and three-quarter cloaks appear in their company, pointed back and front, with high collars and full skirts to accommodate the crineline

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-Dr. H. K. Carroll, who has compiled the statistics of religious bodies for the United States census, is pastor of a church at Plainfield, N. J. His report will cover 1,000 large pages.





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Rev. Mr. Granger was a olergyman of the last century who wrote an enormous history of England, in which he was careful to make allusion to every celebrated person and place connected with English chronicle. "Grangerizing" has since become the term used to signify the process of illustrating any work of such a character. The late Mr. John Forster "Grangerized" two copies of "Granger," one in fourteen folio volumes, the other in seventeen. Together they contain between 5,000 and 6,000 portraits. Many of these are singularly rare and costly, and might count as originals.

Mr. Sutherland got hold of a prodigious Clarendon and Burnet, and made it the richest and most extensive pictorial history in existence or ever likely to be in existence. He found nearly 19,000 prints and drawings for it, and no less than 731 portraits of Charles L, 515 of Charles IL, 353 of Cromwell, 278 of James IL and 420 of William IIL If. remarks Mr. Percy Fitzgerald, we only think how few are the portraits of Charles I, and these mostly copies after Vandyke, we shall have an idea of the labor and exploration necessary to gather up the 731. Think also of the pains and cost in cleaning, "laying down," "insetting" and "inlaying" these portraits, the binding, arranging, etc., and we shall not be surprised to learn that this folly occupied the fanatical Sutherland such a lengthy portion of his life. When finished it filled sixty-seven huge volumes and had cost £12,0001 We may conceive all the visitings of print shops, the turning over boxes of prints, the groveling among wynds and lanes, the correspondence and the endless paying of money! To give a finish to his labors, a catalogue was prepared of all the engravings. This filled two great quartes. At Sutherland's death the work was carried on by his widow, who is reported to have given as much as £90 for a single plate! -Temple Bar.

-The women of Judah, it seems, were the first wearors of garments in bifurcated form, and man, perceiving the convenience and comfort of this article of dress, evolved by the superior intelligence of woman, appropriated it to his use and doomed his womankind to incumber their limbs with flowing robes, which render it impossible for them to cope with man in the uneful avocations

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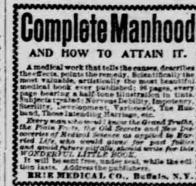
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